

**Multi-Jurisdictional
Hazard Mitigation Plan:
Sweetwater Authority Annex**
San Diego County, California
2023

Table of Contents

1.1.	Planning Area: Sweetwater Authority	3
1.2	Community Rating System Requirements	5
1.3	MJHMP Participation	6
2.1.	Planning Participants	7
2.2.	Planning Process	7
3.1	Outreach Strategies	8
4.1.	Capability Assessment	9
4.1.1.	<i>Planning and Regulatory</i>	9
4.1.2.	<i>Administrative and Technical</i>	10
4.1.3.	<i>Financial</i>	12
4.1.4.	<i>Education and Outreach</i>	13
4.2.	Safe Growth Audit	14
4.3.	National Flood Insurance Program (NFIP)	18
5.1.	Hazards Summary	19
5.1.1.	<i>Hazards Omission</i>	26
5.2	Potential Hazard Exposure and Loss Estimates	27
6.1.	Mitigation Action Evaluation.....	29
6.2.	Mitigation Action Implementation.....	34
7.1.	Mitigation Action Progress	36
7.2.	Evaluation	37
7.3	Incorporation into Existing Planning Mechanisms	39
	Appendices	40
	Table 1: SWEETWATER AUTHORITY Local Planning group (LPG). 2.1 DATA.....	7
	Table 2: CAPABILITY ASSESSMENT: PLANNING & REGULATORY. 4.1 DATA	10
	Table 3: CAPABILITY ASSESSMENT: ADMINSTRATIVE & TECHNICAL. 4.1 DATA	11
	Table 4: CAPABILITY ASSESSMENT: FINANCIAL. 4.1 DATA.....	12
	Table 5: CAPABILITY ASSESSMENT: EDUCATION AND OUTREACH. 4.1 DATA	13
	Table 6: SAFE GROWTH AUDIT: COMPREHENSIVE PLAN. 4.2 DATA.....	15
	Table 11: MITIGATION STRATEGIES. 6.1 DATA	34
	Table 12: SPECIFIC MITIGATION ACTIONS FOR HIGH PRIORITY HAZARDS. 6.2 DATA	35
	Table 13: MITIGATION ACTION IMPLEMENTATION. 6.2 DATA.....	35

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1. SECTION ONE: Determine the Planning Area and Resources

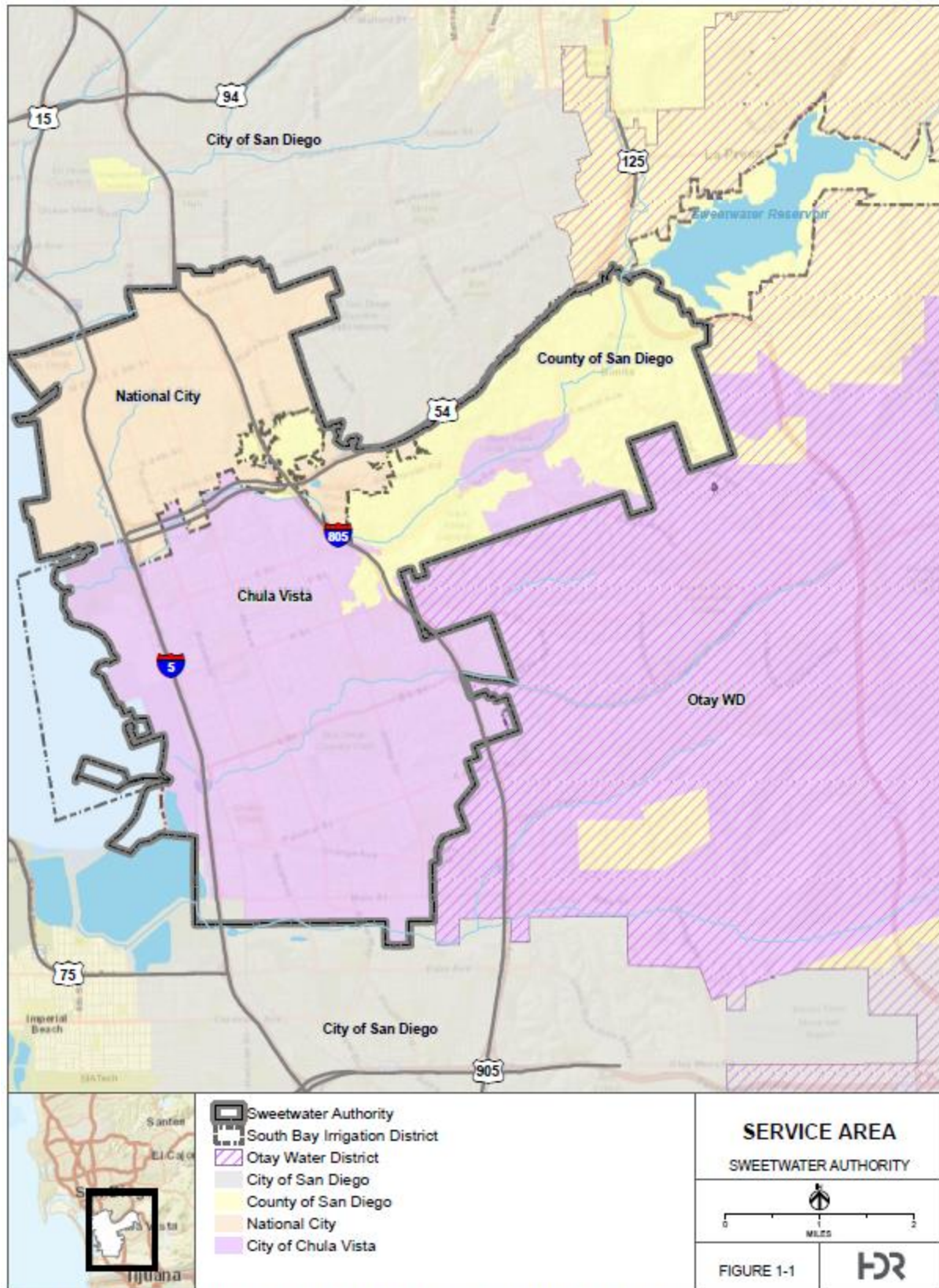
1.1. Planning Area: Sweetwater Authority

Sweetwater Authority (Authority) is a publicly-owned water agency with policies and procedures established by a seven-member Board of Directors. The mission of the Authority is to provide its current and future customers with a safe and reliable water supply through the use of the best available technology, sound management practices, public participation and a balanced approach to human and environmental needs. The Authority provides safe, reliable water service (since 1977) to approximately 200,000 people in a 36 square-mile service area that includes National City, Bonita, and the western and central portions of Chula Vista, California. See more descriptive information [here](#). See the Appendices for a list of [critical customers](#) for Sweetwater Authority.

The Authority owns two surface water reservoir properties in the unincorporated portions of San Diego County: the Sweetwater Reservoir located in Spring Valley and Loveland Reservoir located in Alpine. The Authority also owns and operates water distribution (pumping stations and transmission and main water lines) and storage facilities (reservoir tanks) throughout its service area.

The Authority conducted a Vulnerability Assessment in 2002 and a Risk Resilience Assessment in 2020. In 2020 the Authority revised and updated its Emergency Response and Recovery Plan using the US EPA template. In March 2021, Cal-OES approved the Sweetwater Main Dam Emergency Action Plan. In March 2022, Cal-OES approved the Sweetwater Falls (Loveland) Dam Emergency Action Plan. See more information on emergency preparedness [here](#).

SECTION ONE | Determine the Planning Area and Resources



SECTION ONE | Determine the Planning Area and Resources

1.2 Community Rating System Requirements

The Community Rating System (CRS) is a FEMA program and rewards communities that go beyond the minimum standards for floodplain management under the National Flood Insurance Program (NFIP). **Sweetwater Authority is a special district and therefore is not eligible to participate in the NFIP.**

For more information on the National Flood Insurance Program, see <http://www.fema.gov/national-flood-insurance-program>.

Community Rating System (CRS) Planning Steps	Local Mitigation Planning Handbook Tasks (44 CFR Part 201)
Step 1. Organize	Task 1: Determine the Planning Area and Resources Task 2: Build the Planning Team 44 CFR 201.6(c)(1)
Step 2. Involve the public	Task 3: Create an Outreach Strategy 44 CFR 201.6(b)(1)
Step 3. Coordinate	Task 4: Review Community Capabilities 44 CFR 201.6(b)(2) & (3)
Step 4. Assess the hazard	Task 5: Conduct a Risk Assessment 44 CFR 201.6(c)(2)(i) 44 CFR 201.6(c)(2)(ii) & (iii)
Step 5. Assess the problem	
Step 6. Set goals	Task 6: Develop a Mitigation Strategy 44 CFR 201.6(c)(3)(i) 44 CFR 201.6(c)(3)(ii) 44 CFR 201.6(c)(3)(iii)
Step 7. Review possible activities	
Step 8. Draft an action plan	
Step 9. Adopt the plan	Task 8: Review and Adopt the Plan 44 CFR 201.6(c)(5)
Step 10. Implement, evaluate, revise	Task 7: Keep the Plan Current Task 9: Create a Safe and Resilient Community 44 CFR 201.6(c)(4)

Any jurisdiction or special district may participate in the hazard mitigation planning process. However, to request FEMA approval, each of the local jurisdictions must meet all requirements of 44 CFR §201.6. In addition to the requirement for participation in the process, the Federal regulation specifies the following requirements for multi-jurisdictional plans:

- The risk assessment must assess each jurisdiction's risk where they may vary from the risks facing the entire planning area. (44 CFR §201.6(c)(2)(iii))
- There must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan. (44 CFR §201.6(c)(3)(iv))
- Each jurisdiction requesting approval of the plan must document that it has been formally adopted. (44 CFR §201.6(c)(5))

SECTION ONE | Determine the Planning Area and Resources

1.3 MJHMP Participation

The San Diego County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) lists the jurisdictions that participated in the plan and are seeking plan approval. The San Diego County Multi-Jurisdictional Hazard Mitigation Plan and annexes meet all requirements.

2. SECTION TWO: Build the Planning Team

2.1. Planning Participants

Name	Title	Department
Dan Bresniker	Safety Coordinator	Administrative Services
Clay Clifton	Program Specialist	Administrative Services
Erick Del Bosque	Director of Engineering, interim	Engineering
Pete Famolaro	Biologist	Water Quality
Dan Hayes	Program Manager	Administrative Services
Israel Marquez	Environmental Project Manager	Engineering
Gwyneth Shoecraft	Senior Public Affairs Representative	Public Affairs
Jim Smith	Principal Engineering/ Design Technician	Engineering
Rich Stevenson	Director of Finance	Finance

TABLE 1: SWEETWATER AUTHORITY LOCAL PLANNING GROUP (LPG). 2.1 DATA

2.2. Planning Process

A Hazard Mitigation Working Group (HMWG) was established to facilitate the development of the Plan. Representatives from each incorporated city, special district and the unincorporated county were designated by their jurisdiction as the HMWG member. Each HMWG member identified a Local Mitigation Planning Team for their jurisdiction that included decision-makers from police, fire, emergency services, community development/planning, transportation, economic development, public works and emergency response/services personnel, as appropriate. The jurisdiction-level Local Mitigation Planning Team assisted in identifying the specific hazards/risks that are of concern to each jurisdiction and to prioritize hazard mitigation measures. Authority staff attended HMWG meetings #5 and #8. See dates below.

- San Diego County Planning Meeting #5, February 1, 2022
- San Diego County Planning Meeting #8, January 19, 2022

In addition, Authority staff received notes and resources pertaining to the MJHMP via email from County of San Diego, Office of Emergency Services (OES) staff.

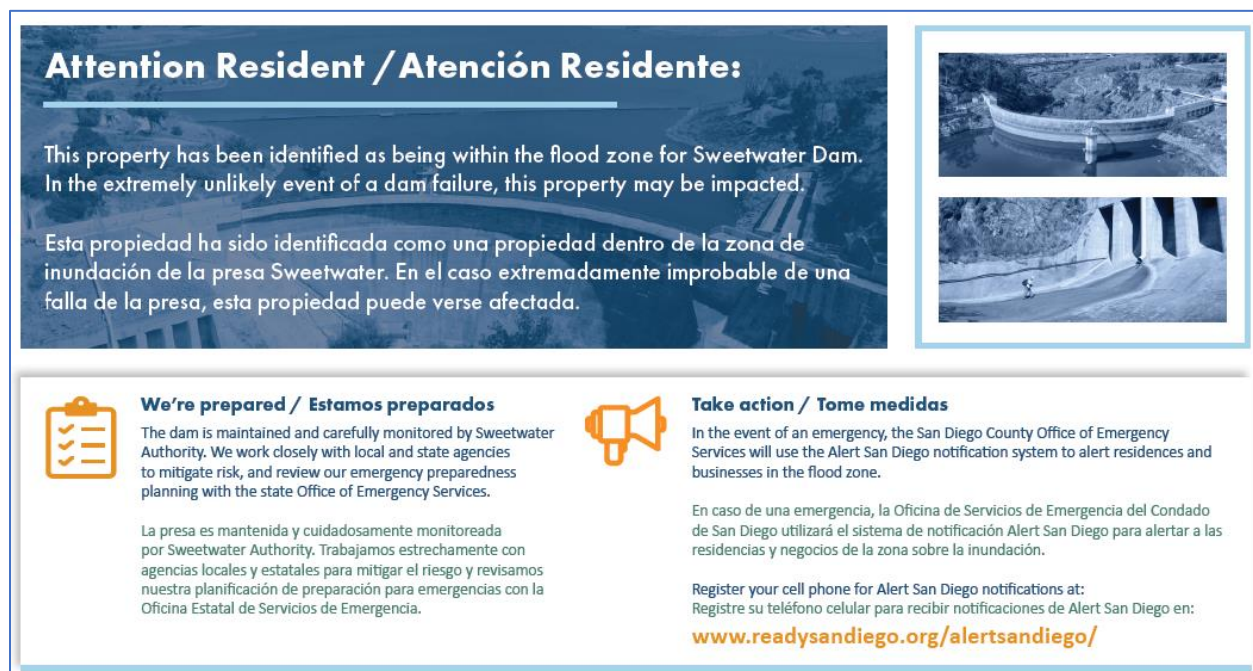
The Authority's internal planning process involved the delegating specific sections and the HMP Worksheets to team members best qualified to provide the information. It also involved reaching out to local jurisdictions (National City, Chula Vista, and the County of San Diego) via phone and email for jurisdictional plans like existing hazard mitigation strategies and zoning and development guidelines to reference in the Authority's document.

3. SECTION THREE: Create an Outreach Strategy

3.1 Outreach Strategies

The Authority replied upon outreach efforts conducted by the County of San Diego. A Hazard Mitigation Plan Web Page, as part of the San Diego County Office of Emergency Services website was developed to provide the public with information. Items posted on the web site included the current plan, and draft updates, by jurisdiction or agency.

As part of the development of emergency action plans (EAPs) for its two dams, Sweetwater Main Dam and Sweetwater Falls (Loveland) Dam, the Authority conducted community outreach to areas that might be impacted by a dam failure. The outreach consisted of bilingual postcards (English and Spanish) mailed to all residents and businesses in the dam inundation zones. These postcards informed recipients of the risk of dam failure and actions they could take to receive emergency notifications. Postcards for Sweetwater Main Dam were mailed in April 2021 and postcards for Sweetwater Falls (Loveland) Dam were mailed in January 2022. Below is a copy of the mailed postcard.



4. SECTION FOUR: Review Community Capabilities

Local mitigation capabilities are existing authorities, policies, programs, and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities, and must be included in a hazard mitigation plan by the planning team.

The planning team also may identify additional types of capabilities relevant to mitigation planning.

4.1. Capability Assessment

The primary types of capabilities for reducing long-term vulnerability through mitigation planning are:

- Planning and regulatory
- Administrative and technical
- Financial
- Education and outreach

These capabilities can be expanded and improved by bringing staff from each of these capability areas into the Authority's periodic discussions and planning to reduce risk.

4.1.1. Planning and Regulatory

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. The planning and regulatory capabilities of the Authority are listed below.

Plans	Yes/No Year	Does the plan address hazards?
		Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan 2020 Urban Water Management Plan	Yes 2020	Yes Yes No.
Capital Improvements Plan	Yes 2021	Yes Yes Yes
Economic Development Plan	No	
Local Emergency Operations Plan Emergency Response & Recovery Plan	Yes 2021	Yes Yes, taken from the Risk Resilience Assessment (2020)

SECTION FIVE | Conduct a Risk Assessment

		Yes
Continuity of Operations Plan SWA Strategic Plan	Yes 2021	Yes Yes Yes
Transportation Plan	No	
Stormwater Management Plan	Yes	Yes Region-wide MS4 Permit - Order No. R9-2013-0001 No Yes
Community Wildfire Protection Plan Southwest San Diego	Yes 2016	Yes Yes Yes
M. Real estate disclosure requirements	No	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation) Sweetwater Main Dam and Sweetwater Falls (Loveland) Dam Emergency Action Plans (2021 and 2022)	Yes 2021	Yes Yes Yes
How can these capabilities be expanded and improved to reduce risk?		
For periodic review of Authority documents, broaden the review team to include non-traditional departments such as Public Affairs, Information Systems and Admin Services.		

TABLE 2: CAPABILITY ASSESSMENT: PLANNING & REGULATORY. 4.1 DATA

4.1.2. Administrative and Technical

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. For smaller jurisdictions without local staff resources, if there are public resources at the next higher-level government that can provide technical assistance, indicate so in your comments:

Administration	Yes/No	Describe capability Is coordination effective?
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Engineers and Technicians Yes, especially related to Public Water Systems
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Construction practices related to Public Water Systems Yes
Planners or Engineer(s) with an understanding of natural and/or manmade hazards	Yes	Engineering Manager, Principal Engineering/ Design Technician, and Environmental Project Manager. Yes.

SECTION FIVE | Conduct a Risk Assessment

Staff	Yes/No FT/PT1	Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation?
		Is coordination between agencies and staff effective?
Mitigation Planning Committee	Yes	Multi-department team assembled for the 2020 Risk Resilience Assessment (RRA). Yes.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Yes	Habitat Maintenance and Watershed Caretakers. Yes
Mutual aid agreements	Yes	Cal-WARN Operations Plan (2014) and Shared Services Manual (2011). Yes.
Chief Building Official	N/A	
Floodplain Administrator	N/A	
Emergency Manager Authority Risk Manager	Yes P/T	Authority staff (Risk Manager) cannot enforce state and county regulations. Yes, some staff participated in the RRA and ERRP development. Staff coordinated the Sweetwater Main Dam and Sweetwater Falls Dam (Loveland) EAP with Cal-OES.
Surveyors	Yes	N/A Unknown. Yes
Staff with education or expertise to assess the community's vulnerability to hazards	Yes	N/A Not formally trained but many years of experience Unknown
Community Planner	No	
Scientists familiar with the hazards of the community	Yes	N/A Yes Yes
Civil Engineer	Yes (2)	N/A Unknown. Yes
Personnel skilled in GIS and/or HAZUS	Yes	N/A No Unknown
Grant writers	Yes (1)	N/A Yes, for watershed/ source water protection Yes
How can these capabilities be expanded and improved to reduce risk?		
Bring Authority staff listed in Table 3 into the periodic review team for Authority documents listed in Table 2.		

TABLE 3: CAPABILITY ASSESSMENT: ADMINSTRATIVE & TECHNICAL. 4.1 DATA

SECTION FIVE | Conduct a Risk Assessment

4.1.3. Financial

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation:

Funding Resource	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Community Development Block Grants (CDBG)	No	N/A
Capital improvements project funding	Yes	Yes, this funding source is used to build new infrastructure and replace or improve existing infrastructure. Yes, proposals to fund mitigation projects could be presented to SWA Board of Directors for capital improvement funding.
Authority to levy taxes for specific purposes	No	N/A
Fees for water, sewer, gas, or electric service	Yes	Yes, this funding source is used to maintain existing infrastructure. Yes, proposals to fund mitigation maintenance projects could be presented to SWA Board of Directors for capital improvement funding.
Impact fees for homebuyers or developers for new developments/homes	Yes	Yes, this funding source is used to build new infrastructure and replace or improve existing infrastructure. Yes, proposals to fund mitigation projects could be presented to SWA Board of Directors for capital improvement funding.
Incur debt through general obligation bonds	Yes	No, this funding source would have not been used in the past. SWA typically issued Revenue Bonds and would not typically issue General Obligation Bonds.
Incur debt through special tax and revenue bonds	Yes	Yes, revenue bonds have been used to build new infrastructure and replace or improve existing infrastructure. Yes, proposals to fund mitigation projects could be presented to SWA Board of Directors for Revenue Bond funding.
Incur debt through private activity bonds	No	N/A
Community Development Block Grants (CDBG)		(these ones are repeated from above)
Capital improvements project funding		(these ones are repeated from above)
Authority to levy taxes for specific purposes		(these ones are repeated from above)
How can these capabilities be expanded and improved to reduce risk?		
Including mitigation projects in the Authority's Five-year Capital Projection would allow these types of projects to be included in the financial planning process, thereby improving the chances for successful project completion.		

TABLE 4: CAPABILITY ASSESSMENT: FINANCIAL. 4.1 DATA

SECTION FIVE | Conduct a Risk Assessment

4.1.4. Education and Outreach

Identify education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information:

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Education partnerships with school districts & local non-profit; curriculum includes environmental protection. Yes
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Ongoing public communication regarding water use/efficiency, emergency preparedness & environmental education in social media, newsletters and other outreach. Yes
Natural disaster or safety related school programs	No	
StormReady certification	N/A	
Firewise Communities certification	N/A	
Public-private partnership initiatives addressing disaster-related issues	No	
Other	Yes	Dam emergency action plan (EAP) outreach - Postcards mailed to residences and businesses in the inundation zones for Sweetwater Main Dam (April 2021) and Sweetwater Falls (Loveland) Dam (January 2022)

How can these capabilities be expanded and improved to reduce risk?

The Authority will review its Dam EAPs periodically and resend postcards to residences and businesses in the inundation zones if there are changes at either dam or development in the inundation zones.

TABLE 5: CAPABILITY ASSESSMENT: EDUCATION AND OUTREACH. 4.1 DATA

SECTION FIVE | Conduct a Risk Assessment

4.2. Safe Growth Audit

Identify gaps in your community's growth guidance instruments and improvements that could be made to reduce vulnerability to future development:

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?		
Refer to Land Use policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated areas of Bonita, Spring Valley and Alpine.	N/A	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	N/A	
Refer to Land Use policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated areas of Bonita, Spring Valley and Alpine.		
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	N/A	
Refer to Land Use policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated areas of Bonita, Spring Valley and Alpine.		
Transportation		
1. Does the transportation plan limit access to hazard areas?	N/A	
Refer to Land Use policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated areas of Bonita, Spring Valley and Alpine.		
2. Is transportation policy used to guide growth to safe locations?	N/A	
Refer to transportation policies and guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	N/A	
Refer to transportation policies and guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		

SECTION FIVE | Conduct a Risk Assessment

Comprehensive Plan (continued)	Yes	No
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	X	
The Authority maintains an Urban Runoff Diversion Structure on the north side of Sweetwater Reservoir. This system protects the quality of water in the reservoir from dry weather runoff pollutants. Also, refer to growth/ development and environmental protection policies and guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
2. Do environmental policies maintain and restore protective ecosystems?		
In 2017 the Authority implemented an “Environmental Compliance – Habitat and Biological Management” policy that guides its operations in the Sweetwater Reservoir and Lake Loveland properties. The Authority also actively participates in the review of proposed projects and proposed land use changes in watershed areas upstream of the reservoirs or around water wells, to ensure protection of water quality, wells, and riparian ecosystems. Also refer to growth/ development and environmental protection policies and guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.	X	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	N/A	
Refer to growth/ development and environmental protection policies and guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	N/A	
Refer to public safety policies and guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
2. Is safety explicitly included in the plan’s growth and development policies?	N/A	
Refer to public safety policies and guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	N/A	
Refer to public safety policies and guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		

TABLE 6: SAFE GROWTH AUDIT: COMPREHENSIVE PLAN. 4.2 DATA

SECTION FIVE | Conduct a Risk Assessment

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
Subdivision Regulations	Yes	No
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
3. Do the regulations allow density transfers where hazard areas exist?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		

SECTION FIVE | Conduct a Risk Assessment

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	N/A	
Refer to Land Use and Zoning policies and development guidelines for the cities of National City and Chula Vista and the County of San Diego for the unincorporated area of Bonita, Spring Valley and Alpine.		

TABLE 7: SAFE GROWTH AUDIT: ZONING, SUBDIVISIONS, CIP, AND OTHER. 4.2 DATA

SECTION FIVE | Conduct a Risk Assessment

4.3. National Flood Insurance Program (NFIP)

Jurisdictions where FEMA has issued a floodplain map but are currently not participating in the NFIP may meet this requirement by describing the reasons why the community does not participate. **Sweetwater Authority is a special district and therefore is not eligible to participate in the NFIP.**

5. SECTION FIVE: Conduct a Risk Assessment

The planning team conducts a risk assessment to determine the potential impacts of hazards to the people, economy, and built and natural environments of the community. The risk assessment provides the foundation for the rest of the mitigation planning process, which is focused on identifying and prioritizing actions to reduce risk to hazards.

In addition to informing the mitigation strategy, the risk assessment also can be used to establish emergency preparedness and response priorities, for land use and comprehensive planning, and for decision making by elected officials, city and county departments, businesses, and organizations in the community.

5.1. Hazards Summary

The Authority used data provided by the County of San Diego OES, except for *Dam Failure*, to populate the table below in identifying which hazards are most significant to the planning area:

Hazard	Location (Geographic Area Affected)	Maximum Probable Extent (Magnitude/Strength)	Probability of Future Events	Overall Significance Ranking
Avalanche	Negligible	Weak	Low	Low
Dam Failure	Refer to the state Department of Water Resources, Division of Safety of Dams (DSOD) report that describes the downstream hazard classifications and condition assessment of dams for Sweetwater Main and Sweetwater Falls. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Dams-Within-Jurisdiction-of-the-State-of-California-Listed-Alphabetically-by-County-September-2021.pdf			
Drought	Significant	Severe	High	High
Earthquake	Significant	Extreme	Occasional	High
Erosion	Limited	Moderate	High	Medium
Expansive Soils	Limited	Weak	High	Medium
Extreme Cold	Limited	Weak	Low	Low
Extreme Heat	Extensive	Severe	High	High
Flood	Significant	Severe	High	High
Hail	Limited	Weak	Low	Low
Hurricane	Limited	Weak	Low	Low
Landslide	Extensive	Severe	Low	Medium

SECTION FIVE | Conduct a Risk Assessment

Lightning	Significant	Weak	High	Medium
Sea Level Rise	Negligible	Weak	Low	Low
Severe Wind	Extensive	Weak	Very High	Medium
Severe Winter Weather	Significant	Moderate	High	Medium
Storm Surge	Negligible	Weak	Low	Low
Subsidence	Negligible	Weak	Low	Low
Tornado	Negligible	Weak	Low	Low
Tsunami	Negligible	Weak	Low	Low
Wildfire	Extensive	Extreme	Very High	High

TABLE 8: HAZARDS SUMMARY. 5.1 DATA

Definitions for Classifications

Location (Geographic Area Affected)

- **Negligible:** Less than 10 percent of planning area or isolated single-point occurrences
- **Limited:** 10 to 25 percent of the planning area or limited single-point occurrences
- **Significant:** 25 to 75 percent of planning area or frequent single-point occurrences
- **Extensive:** 75 to 100 percent of planning area or consistent single-point occurrences

Maximum Probable Extent (Magnitude/Strength based on historic events or future probability)

- **Weak:** Limited classification on scientific scale, slow speed of onset or short duration of event, resulting in little to no damage
- **Moderate:** Moderate classification on scientific scale, moderate speed of onset or moderate duration of event, resulting in some damage and loss of services for days
- **Severe:** Severe classification on scientific scale, fast speed of onset or long duration of event, resulting in devastating damage and loss of services for weeks or months
- **Extreme:** Extreme classification on scientific scale, immediate onset or extended duration of event, resulting in catastrophic damage and uninhabitable conditions

Hazard	Scale / Index	Weak	Moderate	Severe	Extreme
Drought	Palmer Drought Severity Index ³	-1.99 to +1.99	-2.00 to -2.99	-3.00 to -3.99	-4.00 and below
Earthquake	Modified Mercalli Scale ⁴	I to IV	V to VII	VII	IX to XII
	Richter Magnitude ⁵	2, 3	4, 5	6	7, 8

SECTION FIVE | Conduct a Risk Assessment

Probability of Future Events

- **Unlikely:** Less than 1 percent probability of occurrence in the next year or a recurrence interval of greater than every 100 years.
- **Occasional:** 1 to 10 percent probability of occurrence in the next year or a recurrence interval of 11 to 100 years.
- **Likely:** 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years
- **Highly Likely:** 90 to 100 percent probability of occurrence in the next year or a recurrence interval of less than 1 year.

Overall Significance

1. **Low:** Two or more criteria fall in lower classifications, or the event has a minimal impact on the planning area. This rating is sometimes used for hazards with a minimal or unknown record of occurrences or for hazards with minimal mitigation potential.
2. **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
3. **High:** The criteria consistently fall in the high classifications and the event is likely/highly likely to occur with severe strength over a significant to extensive portion of the planning area.

- Cumulative meteorological drought and wet conditions: <http://ncdc.noaa.gov/>
- Earthquake intensity and effect on population and structures: <http://earthquake.usgs.gov>
- Earthquake magnitude as a logarithmic scale, measured by a seismograph: <http://earthquake.usgs.gov>
- Hurricane rating based on sustained wind speed: <http://nhc.noaa.gov>
- Tornado rating based on wind speed and associated damage: <http://spc.noaa.gov>

After reviewing the local hazard maps and exposure/loss in Table 8 above, the following hazards were identified by the HMPG as their top five: **Drought, Earthquake/Landslide, Extreme Heat, Flooding, and Wildfire**. The hazards are presented are not ordered and do not signify a level of importance to the HMPG. A brief rationale for including each of these is included.

- **Earthquake/Landslide:** Geographic extent of this hazard is the Authority's service area. A greater percentage of the Authority's critical infrastructure is potentially more exposed to earthquake hazard relative to other hazards below. The Rose Canyon Fault Zone, considered an active fault, lies 8.4 miles west of Sweetwater Main Dam at its closest point) and is capable of generating an earthquake that could damage above ground and below ground water storage and infrastructure throughout the District. Since some of the Authority's water is imported from the San Diego County Water Authority (SDCWA)/ Los Angeles Metropolitan Water District (MWD) aqueduct, earthquake activity along the San Andreas and Elsinore Faults would likely disrupt water delivery to the SDCWA and the Authority. The La Nacion fault, located west of Sweetwater Main Dam, is considered inactive.

SECTION FIVE | Conduct a Risk Assessment

There were two slope failures during heavy rains in January 1993; Slope below Bonita Bel Aire Tank. (A2674); Wheeler Tank Slope failure. (BP 93-06E).

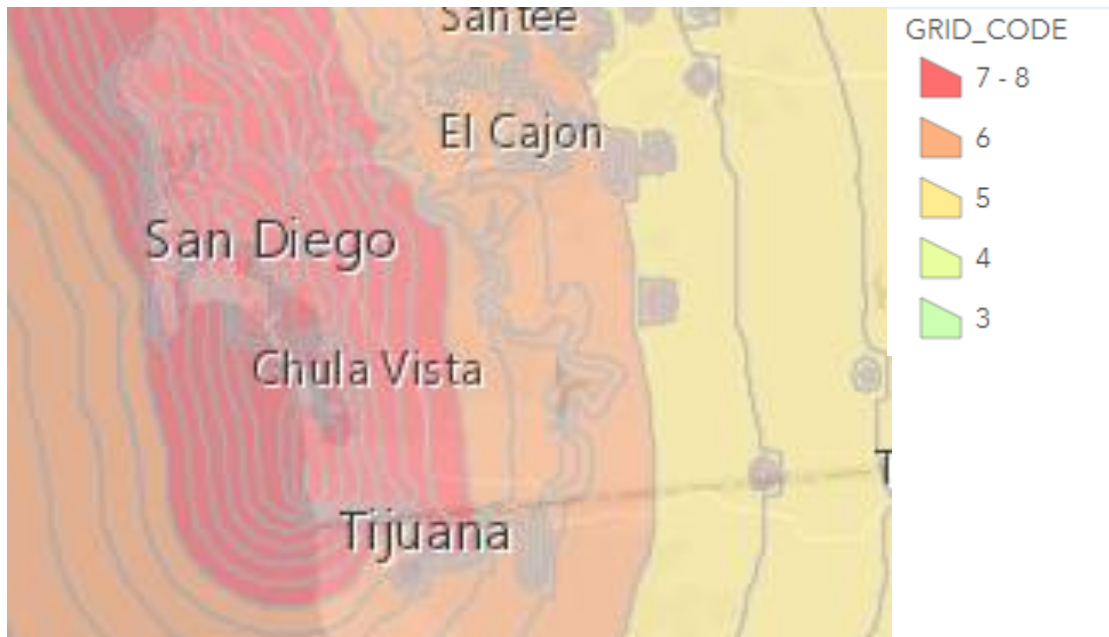


FIGURE 1: ROSE CANYON 6.9 MAGNITUDE EARTHQUAKE

- **Wildfire:** The seasonal climatic conditions during late summer and fall create numerous serious difficulties regarding the control and protection against fires in the district. The hot, dry weather typical of this area in summer and fall, coupled with Santa Ana winds and low humidity frequently results in wildfires that threaten Pump Stations, partially exposed roofs of underground water reservoirs and above ground water reservoirs. All are susceptible to wildfire because they are situated near open space and steep canyons containing highly flammable, native vegetation. The 2003 Cedar Fire resulted in District property losses of approximately \$1 million and the temporary loss of water delivery to more than 800 homes.

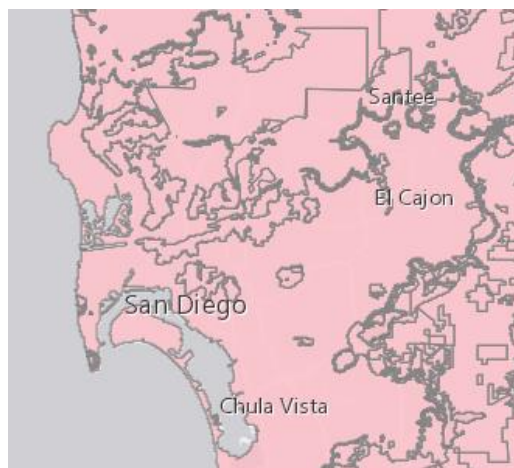


FIGURE 2: WILDFIRE, CALFIRE FHSZ 9 CLASS

SECTION FIVE | Conduct a Risk Assessment

Flooding: There are several critical structures that supply water to the Sweetwater Authority service area that lie in flood prone areas. Two main transmission pipelines, 42-inch and 36-inch lie in the Sweetwater River flood plain within Bonita Valley. Both main and several appurtenant pipelines were affected by heavy rains in January 1993. The 42-inch transmission mainline became exposed due to erosion of the soil cover at three places at the intersection of Briarwood and Sweetwater Road. (A2685 at three places). In addition, several pumping stations, and dirt access roads required repairs. Subsequently, the Authority applied for FEMA funding to repair the damage.

The geographic extent of dam failure flooding hazard is limited to Authority properties within the inundation path of Sweetwater Main Dam and Loveland Lake. Major road arterials and bridges within the inundation path include:

- Highway 5, 805, SR 54. SR94 & SR125
- Sweetwater Road, Bonita Road, Willow Glen Drive, Dehesa Road & Sloane Canyon Road
- MTS bridge at Sweetwater Flood Control, North Second Ave. Bridge, Plaza Bonita Road at Sweetwater River, Willow Street Bridge at Sweetwater River, Central Avenue at Sweetwater River and Corral Canyon Road, Bonita Road Bridge at Sweetwater River, Campo Road Bridge at Sweetwater River, Steel Canyon Road Bridge at Sweetwater River, Camino De Las Piedras Bridge at Sweetwater River, and Sloane Canyon Road Bridge at the confluence of Sweetwater River North Fork and Sweetwater River.



FIGURE 3: 100 YEAR FLOOD PLAN MAP

SECTION FIVE | Conduct a Risk Assessment

Based on FEMA records, there have been numerous repetitive losses (losses of at least \$1,000 each) in San Diego County. These losses are provided in the table below:

Jurisdiction	Number of Repetitive Losses	Jurisdiction	Number of Repetitive Losses	Jurisdiction	Number of Repetitive Losses
Carlsbad	1	Chula Vista	1	Coronado	1
Del Mar	16	El Cajon	2	Encinitas	2
Escondido	2	Imperial Beach	5	La Mesa	2
Lemon Grove	0	National City	4	Oceanside	20
Poway	8	San Diego	53	San Marcos	1
Santee	1	Solana Beach	6	Vista	1
County of San Diego	40				

TABLE 9: REPETITIVE LOSSES DUE TO FLOODS IN SAN DIEGO COUNTY. 5.1 DATA

SECTION FIVE | Conduct a Risk Assessment

- **Dam Failure** - Dam failures can result in severe flood events. When a dam fails, a large quantity of water is suddenly released with a great potential to cause human casualties, economic loss, lifeline disruption, and environmental damage. A dam failure is usually the result of age, poor design, or structural damage caused by a major event such as an earthquake or flood.

Two major dam failures have been recorded in San Diego County. The Hatfield Flood of 1916 caused the failure of the Sweetwater Main and Lower Otay Dams, resulting in 22 deaths. Most of those deaths were attributed to the failure of Lower Otay Dam (County of San Diego Sanitation and Flood Control, 2002).

The figure below displays the extent of [inundation](#)/ hazard areas for a dam failure at the Sweetwater Main Dam. Refer to the state Department of Water Resources, Division of Safety of Dams (DSOD) report that describes the downstream hazard classifications and condition assessment of dams. <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Dams-Within-Jurisdiction-of-the-State-of-California-Listed-Alphabetically-by-County-September-2021.pdf>

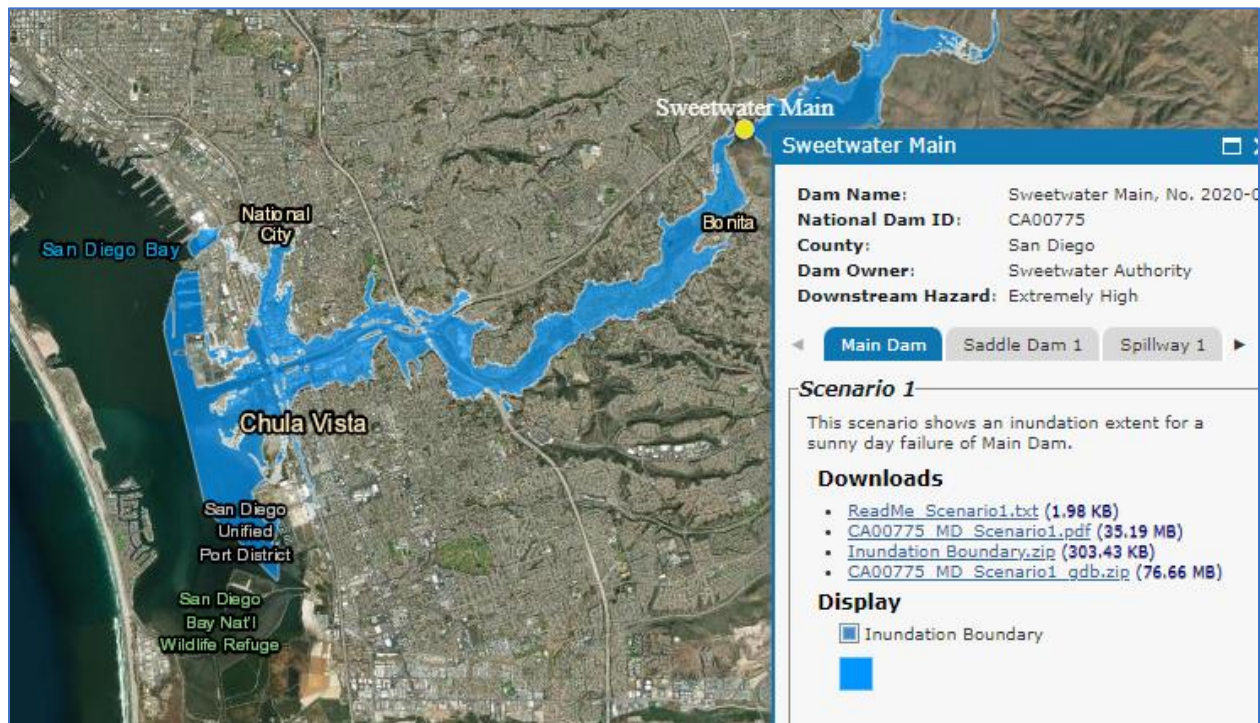


FIGURE 4: SWEETWATER MAIN DAM BREACH INUNDATION AREA

SECTION FIVE | Conduct a Risk Assessment

- **Drought/ Extreme Heat** - Warming temperatures statewide could result in reduced water supply for the San Diego region. The State Water Project and Colorado River provide 75% to 95% of the water supply for the San Diego region, depending on the year. Both of these water supplies originate in mountain snowpack. Over the past 50 years across most of the Southwest, there has been less late-winter precipitation falling as snow, earlier snowmelt, and earlier arrival of most of the year's streamflow. Projections of further warming will result in reduced snowpack, which could translate into reduced water supply for the San Diego region's cities, agriculture, and ecosystems. In fact, studies indicate that San Diego's sources of water could shrink by 20 percent or more by 2050. An additional threat to water supply is the vulnerability of the levees protecting the California Delta, which feeds the State Water Project. According to the California Adaptation Planning Guide, jurisdictions in the San Diego region must carefully consider the vulnerability of their water supply.

Local water managers also report that higher temperatures could lead to increased demand for water for irrigation. Water shortages could become more frequent and more severe in the future, straining the local economy. The potential for drought in San Diego is high.

For Sweetwater Authority, the Reynolds Groundwater Desalination Facility off-sets that potential to some degree. The plant produces 10 million gallons per day to augment the Authority's other local sources – Sweetwater Reservoir and National City Wells.

On April 21, 2021, California Governor Newsom, proclaimed a drought emergency, which enables state response to water supply shortfalls where conditions are extremely dry. This drought emergency proclamation was expanded to include new counties on May 10, 2021. By October 19, 2021, the Governor expanded the drought emergency proclamation to include San Diego County and seven other counties, which were the last of the 58 California counties to be included in the drought emergency proclamation.

On March 28, 2022, the Governor prompted local water suppliers, at the local level, to move to Level 2 of their Water Shortage Contingency Plans, which “requires locally appropriate actions that will conserve water across all sectors, and he directed the State Water Resources Control Board to consider a ban decorative watering at businesses and institutions. Although key improvements have been made since 2016, California is still experiencing drought conditions.

5.1.1. Hazards Omission

During the initial evaluation, the Hazard Mitigation Planning Group (HMPG) determined certain hazards were not included in the original plan's profiling step because they were not prevalent hazards within San Diego County, were found to pose only minor or very minor threats to San Diego County compared to the other hazards (status had not changed), and would, therefore, not be included in this revision. Only hazards that received a High ranking in Section 5.1 (other than CBRNE threats due to their potentially serious impacts) were considered in this mitigation planning process.

5.2 Potential Hazard Exposure and Loss Estimates

Sweetwater Authority reviewed a set of jurisdictional-level hazard maps and data provided by the County of San Diego, including detailed critical facility information and localized potential hazard exposure/loss estimates related to residential, commercial, and critical asset/facilities to identify the top hazards threatening their service area. See Table 10 below.

Hazard Type	Residential			Commercial		Critical Facilities	
	Exposed Population	Number of Residential Buildings	Potential Exposure Loss for Residential Buildings (\$ x 1000)	Number of Commercial Buildings	Potential Exposure Loss for Commercial Buildings (\$ x 1000)	Number of Critical Facilities	Potential Exposure for Critical Facilities (\$ x 1000)
Coastal Storm	0	0	0	0	0	0	0
Sea Level Rise							
Coastal Flooding	0	0	0	0	0	9	97,510
Mean Higher High Water	0	0	0	0	0	6	38,120
Dam Failure	9995	3350	1,310,810	993	300,233	89	1,554,938
Earthquake (Loss)							
(Annualized Loss - Includes shaking, liquefaction and landslide components)	4987	407	540,326	242	290,467	7	234,677
100 Year	0	0	0	--	--	0	0
500 Year	0	0	0	--	--	0	0
Rose Canyon M6.9 Scenario	113,119	33,847	13,149,559	5,152	1,557,707	231	5,936,962
Floods (Loss)							
100 Year	13338	1195	464,377	486	146,942	30	1,109,550
500 Year	30746	4378	1,701,290	857	259,114	44	2,205,624
Rain-Induced Landslide							
High Risk	2592	89	34,576	2	604	--	0
Moderate Risk	4265	5316	2,065,266	301	91,007	41	401,126

SECTION FIVE | Conduct a Risk Assessment

Hazard Type	Residential			Commercial		Critical Facilities	
	Exposed Population	Number of Residential Buildings	Potential Exposure Loss for Residential Buildings (\$ x 1000)	Number of Commercial Buildings	Potential Exposure Loss for Commercial Buildings (\$ x 1000)	Exposed Population	Number of Residential Buildings
Tsunami	5078	0	0	0	0	6	38,120
Wildfire/Structure Fire							
High Fire Hazard	491	472	183,372	21	6394	8	76,072
Very High Fire Hazard	734	0	0	78	23,583	0	0

TABLE 10: SUMMARY OF POTENTIAL HAZARD-RELATED EXPOSURE/LOSS IN SWEETWATER AUTHORITY SERVICE AREA. 5.2 DATA

6. SECTION SIX: Develop a Mitigation Strategy

The mitigation strategy serves as the long-term blueprint for reducing potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process.

The mitigation strategy is made up of three main required components: mitigation goals, mitigation actions, and an action plan for implementation. These provide the framework to identify, prioritize, and implement actions to reduce risk to hazards.

Mitigation goals are general guidelines that explain what the community wants to achieve with the plan. They are usually broad policy-type statements that are long-term, and they represent visions for reducing or avoiding losses from the identified hazards.

Mitigation actions are specific projects and activities that help achieve the goals.

The action plan describes how the mitigation actions will be implemented, including how those actions will be prioritized, administered, and incorporated into the community's existing planning mechanisms. In a multi-jurisdictional plan, each jurisdiction must have an action plan specific to that jurisdiction and its vulnerabilities.

Although not required, some communities choose to develop **objectives** to help define or organize mitigation actions. Objectives are broader than specific actions, but are measurable, unlike goals. Objectives connect goals with the actual mitigation actions.

6.1. Mitigation Action Evaluation

Use this worksheet to help evaluate and prioritize each mitigation action being considered by the planning team. For each action, evaluate the potential benefits and/or likelihood of successful implementation for the criteria defined below.

Rank each of the criteria with a -1, 0 or 1 using the following scale:

- 1 = Highly effective or feasible
- 0 = Neutral
- -1 = Ineffective or not feasible

The table below includes mitigation strategies by agencies that have jurisdiction in the Sweetwater Authority service area. These include: Sweetwater Authority (SWA), Chula Vista (CV), National City (NC) and the County of San Diego (County).

SECTION SEVEN | Keep the Plan Current

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Local Plans and Regulations											
Perdue Treatment Plant Risk Management Plan/Process Safety Management Plan (RMP/PSM) - SWA	1	1	1	1	0	1	0	0	0	1	6
Hazardous Material Business Plans (HMBP) - SWA	1	1	1	1	0	1	0	0	0	1	6
Spill Prevention Counter Measure Control Plans (SPCC) SWA	1	1	1	1	0	1	0	0	0	1	6
Emergency Response & Recovery Plan (ERRP) - SWA	1	1	1	1	1	0	0	0	0	1	6
Sweetwater Reservoir and Sweetwater Falls (Loveland) Dam Emergency Action Plans (EAPs) - SWA	1	1	1	1	1	1	0	0	0	0	6
Risk Resilience Assessment (RRA) – SWA. See the Appendix for detailed recommendations.	1	1	1	1	1	1	0	0	0	0	6
Review and annually update SWA emergency plans, protocols, and standard operational processes.	1	1	1	0	1	1	1	0	0	1	7

SECTION SEVEN | Keep the Plan Current

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Local Plans and Regulations, <i>continued</i>											
Provide and maintain adequate training for City emergency personnel to carry out local responsibilities during various types of emergencies - <i>CV</i>											
Update the City's zoning ordinance periodically and address development in hazard areas and minimize zoning ambiguities - <i>CV</i>											
Finalize and adopt a Community Wildfire Protection Plan - <i>CV</i>											
Develop, implement and maintain, when necessary, mutual aid agreements - <i>CV</i>											
Require structural flood control improvements of new development where flooding is already a problem (existing ordinances) - <i>CV</i>											
Update the General Plan as necessary - <i>NC</i>	1	1	1	1	1	1	0	1	1	1	9
Continue to update Land Use Code periodically - <i>NC</i>	1	1	1	1	1	1	0	1	1	1	9
Adopt and implement current building and fire codes per state cycle. <i>NC</i>	1	1	1	1	1	0	0	1	1	1	8
Continue to regularly adopt and implement existing building codes. <i>NC</i> .	1	1	1	1	1	0	0	1	1	1	8
Encourage and improve communications between the Development Services Department and Fire Department. <i>NC</i>	1	1	1	1	1	0	0	1	1	1	8
Cross-train staff from Development Services Department and Fire on current relevant codes. <i>NC</i>	1	1	1	1	1	0	0	1	1	1	8

SECTION SEVEN | Keep the Plan Current

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Local Plans and Regulations, <i>continued</i>											
Review annually and update as necessary the Flood Plain Ordinance periodically. NC	1	0	1	1	1	1	0	1	1	1	8
Continue to update Land Use Codes periodically. NC	1	1	1	1	1	1	0	1	1	1	9
Implement Geographic Information System (GIS) program citywide. NC	0	0	1	0	1	0	0	1	1	1	5
Use GIS and Census data to plot hazard areas for new development. NC	1	1	1	1	1	0	0	1	1	1	8
Update Operational Area Emergency Operational Plan and associated Annexes - County											
Review the County Consolidated Fire Code annually and update as necessary - County											
Streamline policies to eliminate conflicts and duplication of effort in regional planning efforts by coordinating emergency management activities with regional stakeholders - County											
Publicize and encourage the adoption of appropriate hazard mitigation actions throughout the region - County											
Review Building Codes to reflect current earthquake standards annually and update as necessary - County											
Support public and private sector symposiums that emphasize hazard mitigation planning - County											

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SECTION SEVEN | Keep the Plan Current

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Local Plans and Regulations, <i>continued</i>											
Review and update annually regional emergency plans, Concept of Operation plans, protocols, and standard operational processes - County											
Develop a Climate Action Plan - County											
Structure and Infrastructure Projects											
Continue to mow brush to limit wildfire threat around Sweetwater Reservoir as part of watershed management - SWA	1	1	0	1	0	1	1	1	0	0	6
On-going tree trimming near tank sites, pump stations and perimeter fence at Perdue Treatment Plant - SWA	1	1	1	0	0	0	0	1	0	1	5
Review applications for new development within the City in compliance with the California Environmental Quality Act (CEQA) provisions for flood hazards before construction begin- CV											
See Worksheet 6.1 in the Appendix - NC											
Natural Systems Protection											
Watershed monitoring program, upstream of reservoirs, for ultimate source water protection - SWA	1	1	1	1	0	1	0	0	1	1	7
Property Operations and Maintenance Plan - SWA	1	1	1	1	0	1	0	0	0	1	6
Environmental Compliance – Habitat and Biological Management policy - SWA	0	0	1	0	0	1	1	0	0	1	4
See Worksheet 6.1 in the Appendix - NC											

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SECTION SEVEN | Keep the Plan Current

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Education and Awareness Programs											
Outreach postcards to communities that may be impacted by dam failure - SWA	1	1	1	0	0	0	0	1	0	1	5
Provide citizens with Community Emergency Response Team training opportunities to increase public awareness of hazards and response to hazards, as resources are available - CV											
See Worksheet 6.1 in Appendix - NC											
Develop and maintain public education and outreach programs related to actions residents can take to mitigate hazards they may face - County											
Maintain multi-jurisdictional/multi-functional training and annual exercises to enhance hazard mitigation - County											
Encourage the public to prepare and maintain a 3-day preparedness kit for home and work through outreach events, social media, paid media and earned media - County											

TABLE 117: MITIGATION STRATEGIES. 6.1 DATA

Table 11 includes the Authority's Risk Resilience Assessment (RRA) from 2020. The RRA contains recommendations that will require approval from its Board of Directors to implement. See the RRA recommendations in the [Appendices](#).

6.2. Mitigation Action Implementation

A mitigation action is a specific action, project, activity, or process taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. The actions to reduce vulnerability to threats and hazards form the core of the plan and are a key outcome of the planning process. For more information on potential funding sources and grants, please see the County of San Diego Multi-jurisdictional Hazard Mitigation Base Plan, Section 6.2.

SECTION SEVEN | Keep the Plan Current

Sweetwater Authority did not participate in the 2018 update of the Hazard Mitigation plan so it does not have any mitigation action progress to report. One exception is the Authority's Regional Communication System 800 Hz radio Mutual Aid Agreement which has already been completed. See the [Appendices](#) for a description of this agreement.

Table 12 lists specific mitigation actions from the Table 11 that address the Authority's high priority hazards.

Natural Hazards, ranked High	Mitigation Action
Drought	Continue studying ways to reduce reliance upon imported water and enhance sourcing of local water.
Earthquake	Continue to conduct a Comprehensive Assessment of Sweetwater Main Dam to assess earthquake risk and reduce potential damage from future seismic events; scheduled for completion in October 2024. DSOD review of the Assessment will drive redesign and eventual construction schedules of a dam and appurtenance improvement project.
Extreme Heat	Continue to inform staff of heat illness prevention at staff meetings and company newsletters. Transition of fleet to electric vehicles to reduce greenhouse gas emissions.
Flood	Continue to conduct a Comprehensive Assessment of Sweetwater Main Dam to assess flood risk and reduce potential damage from future flood events; scheduled for completion in October 2024. DSOD review of the Assessment will drive redesign and eventual construction schedules of a dam and appurtenance improvement project.
Wildfire	On-going tree trimming and brush clearing near tank sites, pump stations, the perimeter fence at Perdue Treatment Plant, and around Sweetwater Reservoir.

TABLE 128: SPECIFIC MITIGATION ACTIONS FOR HIGH PRIORITY HAZARDS. 6.2 DATA

The Mitigation Actions listed for Sweetwater Authority (denoted with "SWA" in the Table 11) are primarily plans or policies, most of which do not have specific actions attached to them. For those that do have an associated mitigation action, see Table 13 below.

Mitigation Action	Responsibility	Potential Funding	Timeline
On-going tree trimming near tank sites, pump stations, and the perimeter fence at Perdue Treatment Plant	Water Quality Department, Habitat Maintenance, and System Operators; and Engineering & Operations Department, Watershed Caretakers	Department budget	Every two years, or as needed, starting in 2023.
Review and annually update SWA emergency plans, protocols, and standard operational processes.	Admin Services Department, Programs Staff	Department budget	Annually
Continue to mow/ clear brush to limit wildfire threat around Sweetwater Reservoir as part of watershed management	Engineering & Operations Department, Watershed Caretakers	Department budget	Annually
Property Operations and Maintenance Plans	Facility Managers for Admin, Operations, and water treatment facilities	Department budget	Annually, or as indicated in maintenance plan
Environmental Compliance – Habitat and Biological Management policy	Water Quality Department Biologist	Department budget	Annually, or as indicated in Habitat and Biological Management policy

TABLE 139: MITIGATION ACTION IMPLEMENTATION. 6.2 DATA

7. SECTION SEVEN: Keep the Plan Current

Hazard Mitigation Plan maintenance is the process the planning team establishes to track the plan's implementation progress and to inform the plan update. The plan must include a description of the method and schedule for monitoring, evaluating, and updating it within a 5-year cycle. These procedures help to:

- Ensure that the mitigation strategy is implemented according to the plan.
- Provide the foundation for an ongoing mitigation program in your community.
- Standardize long-term monitoring of hazard-related activities.
- Integrate mitigation principles into community officials' daily job responsibilities and department roles.
- Maintain momentum through continued engagement and accountability in the plan's progress.

Hazard Mitigation Plan updates provide the opportunity to consider how well the procedures established in the previously approved plan worked and revise them as needed. This annex is part of the most recent *San Diego County Multi-Jurisdictional Hazard Mitigation Plan* update. The plan was last updated in 2023. See the *San Diego County Multi-Jurisdictional Hazard Mitigation Plan* section 7.1 for more information.

7.1. Mitigation Action Progress

Plan monitoring means tracking the implementation of the plan over time. The plan must identify how, when, and by whom the plan will be monitored.

Incorporation of mitigation actions into existing planning mechanisms will be done through the routine actions of:

- monitoring other planning/program agendas;
- attending other planning/program meetings;
- participating in other planning processes; and
- monitoring community budget meetings for other community program opportunities.

The successful implementation of this mitigation strategy will require constant and vigilant review of existing plans and programs for coordination and multi-objective opportunities that promote a safe, sustainable community.

Sweetwater Authority did not participate in the 2018 update of the Hazard Mitigation plan so it does not have any mitigation action progress to report.

SECTION SEVEN | Keep the Plan Current

For plan monitoring of mitigation action progress by National City and Chula Vista, see accompanying files labeled as “Worksheet 7.1 (action item)”.

7.2. Evaluation

FEMA Worksheets 7.2 completed by National City and the City of Chula Vista will be submitted to the County of San Diego, Office of Emergency Services with this document.

Sweetwater Authority did not participate in the 2018 update of the Hazard Mitigation plan so it does not have any mitigation plan updates to evaluate.

Table 13 is copied from the *San Diego County Multi-Jurisdictional Hazard Mitigation Plan* section 7.2.

Plan Section	Considerations	Explanation
Mitigation Strategy	Is the mitigation strategy being implemented as anticipated? Were the cost and timeline estimates accurate?	The mitigation strategy experienced delayed implementation due to some staff/project manager turnover and decreased time available to plan and implement. Emergency Operations Center activation for the 2020 COVID-19 Pandemic affected timeline estimates.
	Should new mitigation actions be added to the Action Plan? Should existing mitigation actions be revised or eliminated from the plan?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Are there new obstacles that were not anticipated in the plan that will need to be considered in the next plan update?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Are there new funding sources to consider?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Have elements of the plan been incorporated into other planning mechanisms?	Yes, e.g., the Emergency Operations Plan and other County emergency plans.
Plan Maintenance Procedures	Was the plan monitored and evaluated as anticipated?	The plan was monitored and evaluated as anticipated. However, it would have been more helpful to the Planning Team to have more time to complete Sections 5-7 of this plan, which will be accounted for in the next planning cycle.
	What are needed improvements to the procedures?	None currently. The Planning Team will continue to monitor, assess, and update as needed.

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SECTION SEVEN | Keep the Plan Current

Plan Section	Considerations	Explanation
Planning Process	Should new jurisdictions and/or districts be invited to participate in future plan updates?	All jurisdictions within San Diego County are welcome to participate and will continue to be invited to participate in future plan updates.
	Have any internal or external agencies been invaluable to the mitigation strategy?	All internal and external planning partners are invaluable to our mitigation strategy. Internal partners assisted most with updating the hazard assessment, mitigation actions, strategies and providing progress reports. External partner assistance was most helpful related to climate change incorporation into hazards and updating the hazard assessment.
	Can any procedures (e.g., meeting announcements, plan updates) be done differently or more efficiently?	County OES recommends allotting more time for all planning partners to complete FEMA Handbook Tasks 5, 6 and 7 since these sections require greater amounts of time and effort to collaborate with additional team members, plan/document in-depth goals/objectives/actions and provide supporting documentation for previous plan accomplishments.
	Has the Planning Team undertaken any public outreach activities?	The Planning Team conducted public outreach activities outlined in Section 3 of this plan. Some future public outreach activities are outlined in Section 6 of this plan, but are not inclusive of all public outreach activities.
	How can public participation be improved?	Public participation may be improved with continued partner outreach, seminars, surveys, public education opportunities/presentations and other methods (both virtual and in-person) outlined in Section 6 of this plan.
	Have there been any changes in public support and/or decision-maker priorities related to hazard mitigation?	Public feedback details are provided in Section 3 of this plan. Updated priorities and reasoning are covered in Section 6 and 7 of this plan.
Capability Assessment	Have jurisdictions adopted new policies, plans, regulations, or reports that could be incorporated into this plan?	Jurisdiction-specific adoptions/incorporations are covered in individual annexes to this plan.
	Are there different or additional administrative, human, technical, and financial resources available for mitigation planning?	Not currently. The Planning Team will continue to monitor.
	Are there different or new education and outreach programs and resources available for mitigation activities?	The Planning Team will continue to monitor and seek opportunities to facilitate new education and outreach programs/resources, especially for priority actions outlined in Section 6 of this plan.
	Has NFIP participation changed in the participating jurisdictions?	For NFIP participation, see Sections 1 and 7 of this plan for the County of San Diego and associated plan annexes for all other participating jurisdictions.
Risk Assessment	Has a natural and/or technical or human-caused disaster occurred?	Disasters, such as, but not limited to, pandemic disease and wildfires, have occurred during the planning stages of this plan.
	Should the list of hazards addressed in the plan be modified?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Are there new data sources and/or additional maps and studies available? If so, what are they and what have they revealed? Should the information be incorporated into future plan updates?	See the 2021 County of SD Vulnerability Assessment and Adaptation Report for a list of policies to minimize new residential development in fire prone areas.
	Do any new critical facilities or infrastructure need to be added to the asset lists?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Have any changes in development trends occurred that could create additional risks?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Are there repetitive losses and/or severe repetitive losses to document?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.

TABLE 13 – PLANNING AND MITIGATION EVALUATION. 7.2 DATA.

7.3 Incorporation into Existing Planning Mechanisms

Another important implementation mechanism that is highly effective and low-cost is incorporation of the 2023 Hazard Mitigation Plan updates into other Authority plans and operations, where appropriate and feasible. Where possible, the Authority Planning Team will use existing plans and/or programs to implement hazard mitigation actions. The 2023 Plan update builds upon the momentum developed through previous Authority planning efforts and mitigation programs and recommends implementing actions, where possible, through these other plans and programs. These existing plans and programs include:

- Capital Improvements Plan
- Community Wildfire Protection Plan
- Emergency Response & Recovery Plan
- Sweetwater Main Dam and Sweetwater Falls (Loveland) Dam, Emergency Actions Plans
- Urban Water Management Plan
- Habitat and Watershed Maintenance Programs (vegetation control)
- Ongoing public education by the Public Affairs program (e.g., responsible water use, fire safety, household preparedness, environmental education)
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.

The Authority Planning Team involved in implementing these plans and programs will be responsible for integrating the findings and recommendations of this 2023 Plan update in those documents and programs, as appropriate. As described in Section 7.1, incorporation into existing plans will be done through the routine actions of:

- Monitoring other planning/program items going before the Authority's Board of Directors;
- Attending other planning/program meetings;
- Bring items to the attention of Department Directors to share in their weekly meetings with the General Manager;
- Participating in the Authority's annual budget process.

The successful implementation of this mitigation strategy will require constant and vigilant review of existing plans and programs for coordination and multi-objective opportunities that promote a safe, sustainable community. For example, the Authority will consider incorporating the 2023 Plan update into the Authority's Strategic Plan, as recommended by Assembly Bill 2140.

Efforts should continuously be made to monitor the progress of mitigation actions implemented through these other planning mechanisms and, where appropriate, their priority actions should be incorporated into updates of this hazard mitigation plan.

APPENDICES

Appendices

1. [Worksheet 6.1, Hazard Mitigation Action Evaluation for National City](#)
2. Worksheet 6.1 Mitigation Action, Sweetwater Authority
 - a. [Risk Resilience Assessment \(RRA\) Recommendations](#)
 - b. Sweetwater Authority participation in the [San Diego County- Imperial County Regional Communications System \(RCS\)](#)
3. Sweetwater Authority [Critical Customer List](#)

APPENDICES

Worksheet 6.1, Mitigation Action Evaluation for National City

Mitigation Action, N.C.	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Structure and Infrastructure Projects											
Goal 5: Reduce the possibility of damage and losses to existing assets, particularly people and critical facilities/infrastructure due to earthquakes.											
Conduct workshops with Neighborhood Councils, Chamber of Commerce, individual homeowners, and business community on hazards that require advance preparedness.	1	1	1	1	1	0	0	1	1	1	8
Recommend that the City retrofit the City Hall as funds become available.	1	1	1	1	1	0	0	0	1	1	7
Actively pursue grant funds and other funding sources to retrofit City Hall.	1	1	1	1	1	0	0	0	1	1	7
Maintain an Emergency Response Plan and regularly schedule Exercises with City staff.	1	1	1	1	1	0	0	1	1	1	8
Maintain search and rescue equipment deployment objectives.	1	1	1	1	1	0	0	1	1	1	8
Determine structural safety of buildings to be used for care and shelter of evacuees.	1	1	1	1	1	0	0	1	1	1	8
Create and adopt the following mandatory Ordinances to reduce the possibility of damage and losses due to earthquakes: Unreinforced Masonry Building Seismic Retrofit Ordinance, Pre-Northridge Steel Moment Frame Retrofit Ordinance, Non-Ductile Concrete Building Seismic Retrofit Ordinance, Soft First Story Wood Frame Seismic Building Retrofit Ordinance, Tilt-up Building Seismic Retrofit Ordinance, Wood Frame Cripple Wall Seismic Retrofit Ordinance, and "Excessive Damage" Ordinance.	1	1	1	1	1	0	0	0	1	1	7
Create and adopt a back to business or building occupancy resumption program (BORP) program.	0	0	1	1	0	0	0	1	1	1	5
Adopt and implement existing building codes.	1	1	1	1	1	0	0	1	1	1	8
Conduct inspections of at-risk structures that conduct care for children, seniors, and other group homes.	1	1	1	1	1	0	0	1	1	1	8

APPENDICES

Conduct inspections of child care facilities, senior facilities, and other facilities where occupants may be severely impacted to ensure the structures are structurally safe.	1	1	1	1	1	0	0	1	1	1	8
Conduct informational meetings with Neighborhood Councils, Chamber of Commerce, individual homeowners, and business community.	1	0	1	1	1	0	0	1	1	1	7
Implement GIS program citywide.	0	0	1	1	1	0	0	1	1	1	6
Use GIS and Census data to locate vulnerable buildings.	1	0	1	1	1	0	0	1	1	1	7
Create a Vulnerable Building Inventory list.	1	1	1	1	1	0	0	0	1	1	7
Mitigation Action, N.C.	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Goal 6: Reduce the possibility of damage and losses to existing assets, particularly people and critical facilities/infrastructure due to floods.											
Maintain Flood Retrofitting for Residential Structures.	1	1	0	1	0	1	0	0	0	1	5
Maintain Storm Water System in Operable Conditions.	1	1	1	1	1	1	0	1	1	1	9
Reduce Impervious Surfaces through implementation of a landscape ordinance that encroaches previous site design.	1	1	1	1	1	1	0	0	1	1	8
Maintain and update a city-wide Evacuation Plan.	1	0	1	1	1	0	0	1	1	1	7
Maintain search and rescue equipment deployment objectives.	1	0	1	1	1	0	0	1	1	0	6
Continue to participate in the National Flood Insurance Program and requirement to review applications for conformance with NFIP standards.	1	1	1	0	1	0	0	1	0	1	6
Maintain adequate materials to disperse to the public for installing water barriers when necessary.	1	1	1	1	1	0	0	1	1	1	8
Construct detention basins when necessary and review new development for adequate design features.	1	1	1	1	1	1	0	1	1	1	9
Regularly participate in workgroup activities with the County.	1	1	1	1	1	0	0	1	1	1	8
Regularly participate in workgroup activities with the Caltrans.	1	1	1	1	1	0	0	1	1	1	8
Regularly participate in workgroup activities with the other municipalities.	1	1	1	1	1	0	0	1	1	1	8
Prepare and implement Best Management Practices for all new development.	1	1	1	1	1	1	0	1	1	1	9
Schedule Flood Mitigation and recovery Interactive Exercises.	1	1	1	1	1	1	0	1	1	1	9
Identify and prioritize critical facilities	1	1	1	1	1	1	0	1	1	1	9

APPENDICES

within dam inundation zones.											
Update plans/data periodically to adequately represent vulnerable populations.	1	0	1	1	1	0	0	1	1	1	7
Conduct survey of assets within dam inundation areas.	1	1	1	1	1	0	0	1	1	1	8
Update GIS maps that identify the dam inundation zones.	1	1	1	1	1	0	0	1	1	1	8
Mitigation Action, N.C.	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Goal 7: Reduce the possibility of damage and losses to existing assets, particularly people and critical facilities/infrastructure due to structural fire/wildfire.											
Regularly maintain a Fire Prevention Program.	1	1	1	1	1	0	0	1	1	1	8
Regularly maintain a Pre-Fire Plan Program.	1	1	1	1	1	0	0	1	1	1	8
Regularly maintain a Fire Suppression Program.	1	1	1	1	1	0	0	1	1	1	8
Assess staffing levels of Fire Prevention Staff and increase as appropriate.	1	1	1	1	1	0	0	1	1	1	8
Develop a Housing Inspection Program and routinely conduct housing inspections of homes over 50 years old.	1	1	0	0	0	0	0	0	0	1	3
Conduct a Housing Outreach Program.	1	1	0	0	0	0	0	0	1	1	4
Maintain/update all Arson Registrants with required registration and conditions of probation or parole.	1	1	1	1	1	0	0	1	1	1	8
Maintain response times, pumping capacity and apparatus and equipment deployment objectives.	1	1	1	1	1	0	0	1	1	1	8
Annually assess staffing levels and ensure adequate staffing is available to meet fire suppression objectives.	1	1	1	1	1	0	0	1	1	1	8
Maintain standard operating procedures for fire ground operations.	1	1	1	1	1	0	0	1	1	1	8
Conduct annual wildland fire fighting and ICS training to ensure operational readiness.	1	1	1	1	1	0	0	1	1	1	8
Identify and work to eliminate non-fire resistant roofs.	1	1	0	0	0	0	0	0	0	1	3
Install automatic fire detection and extinguishing systems in buildings according to adopted codes.	1	1	1	1	0	0	0	0	1	1	6
Maintain mutual/auto aid agreements with neighboring municipalities.	1	1	1	1	1	0	0	1	1	1	8
Maintain an inspection process to ensure buildings are constructed in accordance with adopted codes.	1	1	1	1	1	0	0	1	1	1	8
Conduct evacuation drills in high rise buildings.	1	1	0	0	0	0	0	0	1	1	4

APPENDICES

Maintain/update all Arson Registrants with required registration and conditions of probation or parole.	1	1	1	1	1	0	0	1	1	1	8
Implement GIS program citywide.	0	0	1	1	1	0	0	1	1	1	6
Use GIS and Census data to locate vulnerable buildings.	1	0	1	1	1	0	0	1	1	1	7
Mitigation Action, N.C.	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Goal 8: Reduce the possibility of damage and losses to existing assets, particularly people and businesses, due to tsunami.											
Clearly identify potential tsunami prone areas.	1	1	1	1	1	0	0	1	1	1	8
Review the Tsunami Evacuation Playbook periodically to ensure efficient notification protocols.	1	0	1	1	1	0	0	1	1	1	7
Enforce regulatory measures related to development within 100-year flood plain.	1	1	1	1	1	0	0	1	1	1	8
Periodically review the City's compliance with NFIP regulations, as resources become available.	1	1	1	1	1	0	0	1	1	1	8
Restrict ability to re-build, unless mitigation measures to avoid repeat losses are taken.	1	1	1	1	1	0	0	1	1	1	8
Work with regional agencies, (OES, UDC, SanGIS) to accurately map the tsunami inundation maps.	1	1	1	1	1	0	0	1	1	1	8
Share and train with acquired information with all City departments and personnel.	1	0	1	1	1	0	0	1	1	1	7
Continue to coordinate with neighboring jurisdictions on joint training opportunities between staffs.	1	0	1	1	1	0	0	1	1	1	7
Mitigation Action, N.C.	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Natural Systems Protection											
Goal 9: Reduce the possibility of damage and losses to people, facilities/infrastructure, publicly owned facilities and other assets due to extreme heat and drought.											
Encourage residents to adopt drought tolerant landscaping or xeriscape practices.	0	0	1	1	1	1	0	1	1	1	7
Organize outreach to vulnerable populations.	1	1	1	1	1	0	0	1	1	1	8
Provide educational materials on severe weather and mitigation strategies on the City website and through all forms of social media.	1	1	1	1	1	0	0	1	1	1	8

APPENDICES

Link vulnerable populations to resources such as cooling centers and transportation services in order to reduce losses in the face of drought or extreme heat.	1	0	1	1	1	0	0	1	1	1	7
Continue to participate in the National Weather Service StormReady Program.	1	0	1	1	1	0	0	1	1	1	7
Implement water efficiency upgrades at municipal buildings, parks and publicly owned facilities.	0	0	1	1	1	1	0	1	1	1	7
Mitigation Action, N.C.	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Education and Awareness Programs											
Goal 2: Promote public understanding, support and demand for hazard mitigation.											
Conduct workshops with Neighborhood Councils, Chamber of Commerce, interested groups, schools, individual homeowners, and business community on hazards that require advance preparedness.	1	1	1	1	1	0	0	1	1	1	8
Continue to promote disaster preparedness with the distribution of print materials or videos.	1	1	1	1	1	0	0	1	1	1	8
Participate in workgroup activities with the County Office of Emergency Services (OES), Unified Disaster Council (UDC).	1	1	1	1	1	0	0	1	1	1	8
Participate in workgroup activities with other municipalities.	1	1	1	1	1	0	0	1	1	1	8
Participate in workgroup activities with SANDAG.	1	1	1	1	1	0	0	1	1	1	8
Participate in workgroup activities with Caltrans.	1	1	1	1	1	0	0	1	1	1	8
Conduct workshops with the Chamber of Commerce, Rotary Clubs, etc.	1	1	1	1	1	0	0	1	1	1	8
Conduct informational meetings with business owners/managers.	1	1	1	1	1	0	0	1	1	1	8
Develop method to keep community informed of progress.	1	0	1	1	1	0	0	1	1	1	7
Actively implement code enforcement for building without permits.	1	1	1	1	1	0	0	1	1	1	8
Actively implement code enforcement for hazardous occupancies in accordance with adopted codes.	1	1	1	1	1	0	0	1	1	1	8

APPENDICES

Mitigation Action, N.C.	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Goal 3: Build and support local capacity and commitment to continuously become less vulnerable to hazards.											
Update and adopt the City of National City Emergency Plan every 10 years.	1	1	1	1	1	0	0	1	1	1	8
Update and adopt the Hazard Mitigation Plan every 5 years.	1	1	1	1	1	0	0	1	1	1	8
Work with the Fire Department, Development Services Department, Community Development Department, and Police Department to develop the hazard mitigation plan.	1	1	1	1	1	0	0	1	1	1	8
Implement hazard mitigation plan recommendations.	1	1	1	1	1	0	0	1	1	1	8

APPENDICES

Worksheet 6.1. Mitigation Action Implementation, Sweetwater Authority

Risk Resilience Assessment (RRA), March 2020

RRA Recommendations based upon facility visits and staff interviews

RRA category	Recommendation	Area/ facility	Priority
general	Continue studying ways to reduce reliance upon imported water and enhance sourcing of local water	Supply	high
general	Continue with ongoing training and cross-training programs in order to develop managers from within	Staff	high
general	Make modularity and interchange of parts for equipment and systems (including physical security systems) a purchasing criterion to the extent possible	Purchasing	medium
general	Audit spare parts on hand and evaluate which items currently carried should be kept in stock to enhance system resilience	Purchasing	medium
general	Investigate benefits of adding dual fuel generators at key facilities to provide power source redundancy	Power	medium
general	Consider the conversion from gaseous chlorine to an inherently safer technology such as sodium hypochlorite at Perdue WTP	Perdue WTP	medium
physical security	Suggested improvements include installing additional bollards and perimeter fencing at City of San Diego Interconnection	San Diego interconnect	medium
cyber security	Put into action a program that informs the Engineering staff of the potential for a cyber breach in order to integrate functionality of future electrical and mechanical SCADA system components and subsystems	cyber security	medium
cyber security	Implement a program for testing standards including test data selection, protection, and system verification established to ensure system completeness	cyber security	low
cyber security	Implement the orange-coded security controls as listed in the AWWA Cybersecurity Risk Management Tool within the Section 5 tables and Appendix H	cyber security	medium
Emergency Preparedness	Complete NIMS 300/400 level training for key staff	Emergency Preparedness	high

APPENDICES

Worksheet 6.2 Mitigation Action Implementation, Sweetwater Authority

Jurisdiction:	Sweetwater Authority service area, including National City, western and central Chula Vista, and the unincorporated community of Bonita in the San Diego County.
Mitigation Action/Project Title:	Inclusion in the County of San Diego 800 MHz Regional Communication System for intra-agency communications.
Background/Issue:	In 2008 Sweetwater Authority entered a Mutual Aid Radio Communications Agreement with the San Diego County- Imperial County Regional Communications System (RCS). The RCS uses 800 MHz radio with specific talk groups on the RCS' voice radio network for interagency, mutual aid communications between public safety and public service agencies in the San Diego and Imperial County region.
Ideas for Integration:	
Responsible Agency:	Sweetwater Authority
Partners:	San Diego County- Imperial County Regional Communications System (RCS)
Potential Funding:	
Cost Estimate:	
Benefits: (Losses Avoided)	Not quantified
Timeline:	Implemented
Priority:	
Worksheet Completed by:	Clay Clifton, Sweetwater Authority

APPENDICES

Sweetwater Authority Water Distribution System Master Plan update, December 2021

Table 7-25. Critical Customer List

Meter ID	Hydraulic Model Pipe ID Associated with Meter ID	Description	Source
47641820	P-1401	Bonita-Sunnyside Fire Station 2	Emergency Facilities
32150516	8D5D5FEEBDF74397BCB7440E49ADE7B1	Chula Vista Fire Station 1	
34606926	78F4E54D487B4DC297B603488910A783	Chula Vista Fire Station 2	
32150472	AA7156610A7F4177B49D5C4F27A1659F	Chula Vista Fire Station 5	
36713478	BC3FDF46CE0B43A39A0CD34468E3198E	Chula Vista Fire Station 9	
92450065, 46863808, 46863805, 57974643-F	A4A63BC3237648EC8DFA28267B7BCF16	Chula Vista Police, Chula Vista City Jail	
39728328	4F7E196714654567B9100CCA1B425AAD	Chula Vista/ South Bay Substation	
19093978, 32813113-F, 47077830	F685AD1D6AB6422595DB08E90D7DF454	National City Fire Marshall, National City Police	
99505783	3AD0C96F8EDB410B9BB0C920BC40C5FA	National City Fire Station 31	
45374651, 29070308-F	3C6494995A0A4713B1B952034CBC478A	National City Fire Station 34	
48423509-F, 35743455, 60705415, 60722188, 48646693, 36778350	292BED4181BE43CA82DBEC96EC14B613, 235008C9A81D40A38D1BD00895BC01C8, F4B208B29BB74949A95BAA7AD67D7DA5	Paradise Valley Hospital	
48944441	740B0EA3C2874CFDADFC1A7B825A3E48	San Diego Dispatch	
60804048	8DCD48AD24464FE8BD2F00D97C756231	San Ysidro Health	
17966169	7CEF0EC5329041AB9FBB6C478546BEE7	San Ysidro Health Otay	

APPENDICES

Meter ID	Hydraulic Model Pipe ID Associated with Meter ID	Description	Source
32991513, 49672871, 44929706, 44929691, 44929694, 44929693	C9B31BF5F51A43B6A89F7B092CF6C3AE, 61EE02E9BD154C709A106D44207BF5B4, D3CDBCD8EE044B6CAD5E689A8F03527A	Scripps Mercy Hospital - Chula Vista	
44533478	ECDD8013750344ACB74F15F7D6024357	South Bay Civil Division	
47641785	P-1617	South Bay Detention Facility	
26443	F3D0FB4E7BCC4F32BDE2999B8BC3BE28	Navy Yard	
44533478	ECDD8013750344ACB74F15F7D6024357	Detention Facility/Courthouse	
13477962	CFE57DA98272436FB51C97BE1951A789	Medical Facility / Senior Care	
48646665	3A1DCD24C28D4AC0B364E458D1C9D43B	Fresenius Medical Care	Dialysis centers shapefile
34606841, 61097427, 36376813	CB18BF4207434C0A91760A3AA063876D	Fresenius Medical Care	
47077845, 45281591	5DB94310B5864AD089405EC81419FA1D	SD Dialysis Services and Fresenius Medical Care North America	
34605144-F, 46652273, 38122487, 39869547	188951, 571C076165BD498A9B45F15FC3E39D67	Dialysis center identified by service number	
Meter will be assigned in the future	215F9EBEAB3E4DB28BF21C50BA360546	Future dialysis center	